AMENDMENTS TO THE SPECIFICATION

Please amend the paragraph starting at page 18, line 12 as follows:

In other words, in one aspect of the present invention, the V.34 state machine ~~370~~ 340 may be configured to function as a logical sequencer that, based on the detection of certain signals, for example, as discussed above, and their respective order of detection, may enable or disable processes in the upstream demodulation unit 320. Furthermore, in the case where the retrain/renegotiate detection unit 360 detects either a retrain or a rate renegotiate signals, and respectively transmits a detection signal to the state machine 340, the state machine 340 may be configured to reset the demodulation unit 320 to the respective appropriate states.

Please amend the paragraph beginning at page 19, line 15 as follows:

Figure 4 illustrates a block diagram of the V.90 downstream reconstruction filter 370 of the digital signal processing unit shown in Figure 3 in accordance with one embodiment of the present invention. Referring to the Figure, in the downstream direction, the 16-bit 16 Ks/s data stream from the linear codec 230 (Figure ~~1~~ 2) is provided to a linear adaptive equalizer and decimator 410 which is configured to perform standard adaptive FIR filtering to equalize the input data stream for frequency and phase impairments, and to modify the sampling rate from 16Ks/s to 8Ks/s. The linear filter 410 operates over the frequency range of dc to 4 KHz. Both the input and output samples are represented in 16 bit linear format to achieve adequate signal to noise ratio (for example, more than 80 dB) and quantizing distortion levels. The linear equalizer and decimator 410 then provides the 16-bit 8 Ks/s data stream to a quantizer 420 via a summing unit 430 as explained in further detail below.

Please amend the paragraph beginning at page 20, line 25 as follows:

Moreover, the input to the noise predictor 450 determined by a summing unit 470 is the difference between the output of the equalizer and decimator 410 and the output of the quantizer 420. In one aspect of the present invention, the noise predictor 450 may be configured to update its input signal based upon the quantization error signal received from the summing unit 460 which is determined by comparing the input of the

quantizer 420 to its output. The updated signal from the noise predictor 450 is then provided to the summing unit 430 as described above to be subtracted from the output signal of the equalizer and decimator 410 to remove low frequency errors from the recovered signal. In addition, the quantization error from the summing unit 460 is also provided to the equalizer and decimator 410 to correct for linear frequency and phase deterioration to the 16 Ks/s data received from the codec 230 (Figure ~~1~~ 2).